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ABSTRACT

The report covers a project in the Bangor junior high schools running from the first week in October 1973 to the last week in April 1974. The study sought to find a way to upgrade the career guidance program at the junior high level with little cost in counselor time. Three junior high schools supplied the ninth grade students to be used for experimental and control groups in the study. A pre-posttest decision wh a control group was used for the first part of the test and a posttest only for the second part. In the first school the self-directed search (SDS) test without the use of the SDS kit was administered. In the second school the SDS kits were introduced into the experimental treatment. The third school was used as a control group and used neither the test nor the kits. The Crites Maturity Inventory was used to measure results to determine whether the SDS had stimulated students to seek career information on their own. Results were inconclusive. The third party evaluation (appended to the report) was conducted, recommending the use of SDS kits along with improvements in scheduling and more involvement of classroom teachers. (MU)

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FINAL REPORT

The Self Directed Career Program as a Tool for Presenting Career Information to Ninth Grade Students

Conducted Under
Part D of Public Law 90-576

The project reported herein was performed pursuant to a grant from the Bureau of Adult, Vocational, and Technical Education, Office of Education U.S. Department of Health, Education, and Welfare. Grantees undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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George Vose
Project Director

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The Self Directed Career Program
as a Tool for Presenting Career Information
to Ninth Grade Students

Summary

Time period

This report covers a project in the Bangor Junior High Schools running from the first week of October 1973 to the last week of April 1974.

Goals

The goal of the project was to find a way to upgrade the career guidance program at the Junior High level at little cost in counselor time. Bangor has three Junior High Schools with a guidance counselor in each. Two of the counselors have a ratio of 550 students to one counselor. The third counselor has about 400 students. It is obvious that they do not have the time to do a good job of developing a viable program in Career Education.

The Self Directed Career Program by Dr. John Holland seemed to be a program that would accomplish this goal. This program is based upon Holland's theory of vocational choice and his occupational classification. The student works through an assessment booklet that enables him to prepare a profile which indicates his resemblance to Holland's personality type. These main types are Realistic, Investigative, Artistic, Social, Enterprising and Conventional. The student can then search for suitable occupations that fit his personality type. The complete program also includes a Job Experience Kit and an Occupational Exploration Kit published by Science Research Associates Inc. Since we did not want to commit a great deal of counselor time it was decided to vary methods of presenting the materials.

Specifically we wanted answers to these questions:

1. What effect does the SDS have on a student's attitude toward making a career choice?
2. Does the SDS stimulate students to search out career information without benefit of special materials.
3. Which of three methods of presenting the Self Directed Career Program produces the best results - 1) number of occupations being considered 2) choice satisfaction 3) knowledge of self 4) ability to solve job related problems.

Procedures

The subjects for this study were about 450 ninth grade students. These students attend three junior high schools in Bangor. Two of the schools are about the same size and serve about the same type of students. Each of these 2 schools have one counselor and 550 students. Of these about 185 are ninth grade students. The third school has one counselor, 380 students of which about 100 are ninth graders. For this project each school was used as a separate treatment group.

The instrument used to measure results was the Career Maturity Inventory developed by Dr. John O. Crites and published by CTB/McGraw Hill. This instrument has six sub-tests; Attitude Scale, Self Appraisal, Occupational Information Goal Selection, Planning and Problem Solving. In addition to this test a brief questionnaire asking students to list all occupations they are considering, their first choice and how well they are satisfied with their choice. The first item was scored by counting the occupations listed. The item concerning choice satisfaction used a Likert-type scale with five weighted options.

The study was in two parts. The first half was a pre-post test design with a control group. The second half was a post-test only design. As a pre-test all students were administered the Crites Attitude Scale and the Occupational Knowledge Sub-test. They were also asked to fill out the questionnaire. School number 1 then administered the Self Directed Search without making the SRA kits available. School number two introduced the SRA kits to the students in a classroom situation. The kits were demonstrated and students were told how they could be used. The kits were made available to students from the guidance office. The third school was used as the control and did not use any of the materials.

The students were post-tested using the same instruments. After the post-test school 1 introduced the SRA kits, school 2 used the SDS and school 3 used the SDS and the SRA kits. During the last week in April all students were administered Crites sub-test 1 Self Appraisal and sub-test 5 Problem Solving.

Results

The data gathered in the first part of the study was inconclusive. On the pre-test of the Crites Attitude Scale school 1 was significantly higher than the other two schools. On the post-test there was no significant difference between the three schools. On the Crites sub-test on occupational information there was no difference between the three schools on the pre-test but school number 1 and number 3 scored significantly higher than school 2 on the post-test. In other words school 1 (SDS treatment) and school 3 (control) scored the same on the post-test and both higher than school 2 (SRA kits).

There was a significant difference in the mean number of jobs listed between the three schools in both the pre and post-tests. Again schools 1 and 3 were higher than school 2. The three were equally satisfied with their choices on the pre-test. School 2 was less satisified on the post-test. After all three schools had used the SDS and the SRA materials all students were tested on Self Appraisal and Problem Solving. Schools 1 and 3 were again higher than school 2. The students were asked "Would you recommend continuing this program?" About 88% of all students indicated yes.

Evaluation

Although this project was written as a research project it cannot be considered research that can be generalized. In fact it would be unusual if the results could be replicated using the same schools and the same design. There is too much difference between schools, the school situations change so much and the project took so long that anything could happen. The overall goal of providing career

information at little cost in counselor time was met. The counselors did not spend as much time on careers and yet reached more students than they usually do. The length of time between treatment and testing probably accounts for the inconclusive test results. The ninth grade students in school 2 have no study halls which makes it difficult for students to use the kits. This could account for the lower scores.

Conclusions and Recommendations

On the basis of the experience this year with the Self Directed Career Program it is my recommendation that this program become part of the ninth grade curriculum. The Self Directed Search should be administered early in the fall to all ninth grade students. The career kits should be made easily accessible to all junior high students.

Body of the Report

Statement of the Problem

Bangor has not had a planned career information program to reach all students. This lack has resulted in most of our students entering high school with little or no real knowledge about careers. Most of these students would be able to name a career in which they are interested but would not be able to describe it nor indicate why they chose it. This means that many students do not make a good choice of subjects in high school. The student-counselor ratio in our junior high schools is about 500 to 1. This is too high a ratio for the counselors to do a good job of counseling all students.

The problem was to find a program presenting career information that could be used with all ninth grade students. Further the program could not require a great deal of counselor time nor disrupt the normal school program. The Self Directed Career Program suggested by Dr. John L. Holland seemed to offer a solution.

This program is based upon Dr. Holland's Self Directed Search. This instrument can be worked through by a student on his own and permits him to prepare a profile which indicates his resemblance to Holland's personality types. The student can then look through Holland's Jobs Finder to see what careers fit his personality type. The Job Finder lists 456 careers coded to the letter profile from the SDS and also to the Dictionary of Occupational Titles.

The program also used the Science Research Associates Inc. Job Experience Kits and the Occupational Exploration Kit. The Job Experience Kits offers work-simulations in 20 representative occupations. The Occupational Exploration Kit has 4 pages of discriptive briefs for 400 jobs. These jobs can be coded to Holland's DS code.

Holland's classification of jobs are: 1) R - Realistic and include skilled trades, labor, technical and some helping jobs, 2) I - Investigative includes scientific and some technical jobs, 3) A - Artistic includes musical and writing jobs, 4) S - Social includes teaching and social welfare, 5) E - Enterprising includes sales and managerial jobs, 6) C - Conventional includes office and clerical jobs.

Holland's contention that modal orientation may be inferred from typical vocational interest inventories was confirmed in one study which compared Strong Vocational Interest Blank scores with Vocational choices classified according to one of the six major personality categories (Wall, Osipow and Ashby 1967).

Dr. Holland did a small correlation study in which the SDS Summary Scales were correlated with the Kuder Preference Record. The subjects were 56 juniors and seniors. To get an estimate of the fit each Kuder scale was assigned to one of the six SDS scales. For example, the Kuder Mechanical Scale should correlate most highly with the SDS Realistic Scale. The Scientific Kuder Scale should correlate most highly with the SDS Investigative Scale. In all instances the Kuder Scales correlated in the predicted manner. (Holland 1973)

Goals

The goal of this project was to provide meaningful career information to ninth grade students in three junior high schools in the city of Bangor. The project was set up to yield information as to the best way to present the information.

Specifically we wanted answers to these questions:

1. What effect does the SDS have on a students attitude toward making a career choice?
2. Does the SDS stimulate students to search out career information without benefit of special materials?
3. Which of three methods of presenting the Self Directed Career Program produces the best results - 1) number of occupations being considered 2) choice satisfaction 3) knowledge of self 4) ability to solve job related problems.

Measurement

To determine whether or not the objectives were met two instruments were used. The Career Maturity Inventory was selected as the standardized test. This test was developed by Dr. John O. Crites and is published by CTB/McGraw Hill. This inventory has two parts, an Attitude Scale and a Competence Test. The latter is divided into 5 sub-tests - 1) Knowing Yourself, 2) Knowing About Jobs, 3) Choosing a Job, 4) Looking Ahead and 5) What Should They Do. The Attitude Scale was used to determine the effect of the SDS on a students attitude toward making career choices. The competence sub-test Knowing About Jobs was used to determine whether the SDS stimulates students to search out career information. The Knowing Yourself sub-test was used to measure what effect the SDS had on a students understanding of self. The What Should They Do sub-test was used to measure students ability to solve career problems.

The second instrument was a brief questionnaire asking students to list the number of occupations they are considering and how satisfied they are with their choices.

Population

The population involved in this study was the ninth grade students in three junior high schools. Two of the high schools have about 550 students each. The students come from about the same SES neighborhoods. The two schools test about the same on aptitude and achievement tests. Each school has one experienced counselor. The third school serves a lower SES neighborhood and the mean scores from its students are usually lower than the other two schools. This school has about 380 students and one experienced counselor. One of the large schools has about 190 ninth grade students the other about 160. The smaller school has about 110 ninth graders. Test results could not all be used because of transfers and failure to take both pre and post-test. Each school was considered a separate treatment group. The counselor in each school was responsible for conducting the study in his school.

Part I Procedure

The study was conducted in two parts. The first half was a pre-post test design with a control. The last half was a post-test only design. School 1 was one of the larger schools and school 3 was the other. The smaller school was labeled school 2. School 3 was the control for the first half of the study.

In early October all ninth grade students in the three schools were pre-tested with Crites Attitude Scale and his sub-test Knowing About Jobs. They also were administered the Vocational Guidance Questionnaire. Following this School 1 administered Holland's Self Directed Search to all ninth grade students. This treatment was to determine if the SDS stimulated students to seek career information on their own. School 2 introduced the two SRA kits and demonstrated their use. The kits were made available to students from the guidance office. School 3 was the control so did not use either treatment.

Part I Results

Early in February all ninth graders were retested using the same instruments. The results of the Attitude test are in Table 1.

Table 1
Crites Attitude Scale

School	Pre	Post	Correlation Pre & Post	Difference Pre & Post
1 N 141	36.36	35.75	r.65	NS
2 N 77	34.43	34.49	r.71	NS
3 N 166	34.76	35.18	r.70	NS

T test Pre			T test Post		
1vs2	3.39	S.01	1vs2	1.91	NS
1vs3	3.09	S.01	1vs3	1.03	NS
2vs3	.59	NS	2vs3	1.62	NS

From this data we must conclude that neither treatment had any effect upon the students attitude toward careers.

Table 2
Crites Knowing About Jobs

School	Pre	Post	Correlation Pre & Post	Difference Pre & Post
1 N 140	15.3	16.22	r.70	T=2.78 S.01
2 N 77	14.84	14.81	r.60	NS
3 N 169	14.96	15.83	r.66	T=2.51 S.01

T test Pre			T test Post		
1vs2	1.22	NS	1vs2	4.01	S.001
1vs3	1.0	NS	1vs3	1.16	NS
2vs3	.32	NS	2vs3	2.78	S.01

Both the SDS treatment group and the control group gained significantly in the four months this part of the project ran. We cannot conclude that the SDS treatment had any effect on the student's knowledge about jobs. In other words the SDS did not stimulate students to seek career information on their own. The fact that school 2 made no gain can be partly accounted for by the large number of students from low income homes. Plus the fact that in this school no ninth grade student has a study period from which to go to the guidance office to use the SRA kits.

Item 1 on the Vocational Guidance Questionnaire was scored by counting the number of jobs each student listed and finding the mean of the distribution.

Table 3
Mean Number of Jobs Listed

School	Pre	Post	Difference Pre-Post
1 N159	2.43	N142 2.75	T=2.37 S.02
2 N94	2.0	N79 2.04	NS
3 N199	2.75	N177 3.04	T=2.13 S.05

T test Pre		T test Post	
1vs2	2.85 S.01	1vs2	4.1 S.001
1vs3	2.47 S.02	1vs3	2.04 S.05
2vs3	4.73 S.001	2vs3	6.0 S.001

Increasing the number of occupational alternatives for young people is generally considered an important aspect of the vocational decision making process. (Clarke, Gellat and Levin 1965) Again the results are inconclusive. There was a difference between the schools on the pre-test and the same difference held for the post-test.

Item 3 on the Vocational Guidance Questionnaire asked the students to rate their satisfaction with their job choice on a five point Likert type scale. For the analysis the scale was dichotomized by combining the two positive choices and the negative choices. This resulted in a three by two contingency table. Significance was tested using chi square.

Table 4
Satisfaction with Choice

School	Pre	Post
1	Pos 76% Neg 24%	Pos 83% Neg 17%
2	Pos 77% Neg 23%	Pos 65% Neg 35%
3	Pos 70% Neg 30%	Pos 80% Neg 20%
	X^2 2.27 NS	X^2 9.58 Sig..01

There was no difference on the pre-test but the post-test was significant. An examination shows that the significance is created by school 2 that had less positive responses on the post-test than it did on the pre-test. This I can't explain except by the low SES and the lack of study halls.

Part II Procedure

After the post-testing was completed school 1 made the SRA kits available to the students, school 2 used the SDS with its students and school 3 used the SDS and at the same time demonstrated the SRA kits. Thus all three schools used the Self Directed Career Program in three different ways. The results were measured using Crites competence sub-test 1 Knowing Self and sub-test 5 Problem Solving. The results of both tests are shown in Table 5,

Table 5
Knowing Self

School		Post-test	T tests		
1	N 149	13.56	1vs3	1.38	NS
2	N 78	12.13	1vs2	2.89	s .01
3	N 192	14.15			

Problem Solving

School		Post-test	T tests		
1	N 150	10.59	2vs3	4.55	s .001
2	N 78	8.63	1vs3	NS	
3	N 189	10.46			

The results of Table 5 show nothing that adds to the solution of the orginal problem of finding the best way to present the Self Directed Career Program.

At the end of the project students were given a brief evaluation questionnaire. The results of items 1, 2 and 4 are presented in Table 6.

Table 6
Results of Evaluation Questionnaire

Item 1. Has this program helped you in your thinking about careers?

School	Yes	No	Alittle
1	24%	17%	59%
2	40%	20%	40%
3	38%	11%	51%

X^2 80.9 Sig .001

Item 2. Have you used any of the career kits that have been provided?

School	Yes	No
1	78%	22%
2	34%	66%
3	30%	70%

X^2 80.9 Sig .001

Item 4. Would you recommend continuing this program?

School	Yes	No
1	84%	16%
2	91%	9%
3	89%	11%

X^2 2.93 NS

The reason school 1 had so many more students using the career kits was because they were made available to students in class. A civics teacher with a counselor certificate used the kits with his classes for about a month. The kits were then used by an experienced social studies teacher. This provided much more student use. Schools 2 and 3 kept the kits in the guidance office making it more difficult for students to have access to them. In spite of the large number of

students coming in contact with the kits in school 1 fewer students answered yes to item 1. This seems a little inconsistant. Nearly 90% of the ninth grade students would recommend continuing the program.

Diseussion

This project produced no data from which a judgment concerning the best way to present the Self Directed Career Program can be made. It is our hunch that administering the SDS and making the Career Kits available immediately is the best way to present the program. The data does not bear this out.

An examination of item 2 in Table six may explain this. School 3 that administered the two parts together had only 30% of their students use any of the career materials. It would be necessary for students to study some career information to gain knowledge. The SDS itself does not contain information. It merely makes it possible for students to identify careers that fit their personality. It is up to the student to dig out information about these careers.

This project was conducted in a manner not to disturb the regular school routine. As a result it was somewhat haphazard with counselors working with students when they could get them. The ninth grade in school 2 had no study halls which made it very difficult for students to get to the kits. It would seem that the counselors should try to get teachers involved in the program to insure that all ninth graders make use of all the material. Also adjustments should be made in the schedule to provide time and space for the program.

In spite of the problems counselors felt the program was worthwhile. They reported that the SDS held the interest of students. Those students who used the kits were enthusiastic.

I recommend that this program become part of the ninth grade curriculum with the stipulation that the SDS and the career kits be used at the same time. I further recommend that teachers become more involved with both the SDS and the kits.

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APPENDIX I

FINAL REPORT OF INDEPENDENT EVALUATOR

The Self-Directed Career Program as a Tool for Presenting Career Information to 9th Grade Students.

A Project of the Bangor School Department
Office of Research and Evaluation

June 1974

Keith E. Cook, Ed.D.
Consultant and Independent Evaluator

I. Introduction

This project was conceived and directed under the able leadership of Mr. George Vose, Director of Research and Evaluation for the Bangor, Maine public schools. The 9th grade guidance counselors had primary responsibility for implementing the project within their own schools.

This report will briefly outline the project, followed by a somewhat more detailed report of the evaluative sessions held with counselors and teachers, and conclude with some recommendations.

II. Project Description

The Purpose. This study used Holland's Self-Directed Search (SDS) in an attempt to discover if the SDS program was a viable means for facilitating vocational development with 9th grade students; and to discover if various methods of using the SDS in conjunction with SRA Occupational Kits would prove to be differentially effective. More specifically, the following questions were studied:

1. How does the SDS affect students' attitudes towards career choices?
2. Is the SDS effective in stimulating students to search out career information without the benefit of special career materials?
3. Which of three alternative methods of using the SDS in conjunction with other career development materials produces the best results as measured by—(1) the number of occupations being considered, (2) satisfaction with career choice, (3) knowledge of self, (4) ability to solve job-related problems.

The importance of these foregoing questions emerged from the concern of personnel in the Bangor schools who were striving to find a viable means to conduct a career education program for their students, with a particular concern for minimizing the amount of counselor time necessary to operate the program. Hence, Holland's Self-Directed Search appeared to have the potential for meeting this need.

Procedures. As indicated in the main body of the final report, this study employed a pre-post-test design with a control group, for the first half of the study; the second half being a post-test only design. Briefly, the treatment went as follows: In October, 1973, 9th grade students in school 1 were administered the Self-Directed Search. Following this single administration they simply had "school as usual" until January, 1974, at which time they took the Career Maturity Inventory (CMI) Attitude and Knowledge tests and a locally constructed questionnaire. During the following months of January through April, 1974, these same students had available to them the Science Research Associates, Inc. Job Experience Kit and Occupational Exploration Kit. In April, 1974, the CMI Self Appraisal and Problem Solving tests were administered along with another locally constructed questionnaire.

For school 2, the treatment process was simply the reverse of that for school 1. That is, the 9th grade students in school 2 took the same pre- and post-test instruments concurrently with those in school 1, and during the time interval of October, 1973-January, 1974, these students used the SRA kits followed by an administration of the SDS in January, 1974. As previously indicated post-tests were again administered in April, 1974.

School 3 served as the no-treatment control during the interval October, 1973-January, 1974. Naturally, the same pre- and post-tests were administered to the 9th grade students in this school. For the second part of the project, in January, 1974, the SDS was administered to these students who then were free to use the SRA kits during the months through April, 1974, when they participated along with the other two schools in the common post-testing procedure described.

The results of the data collection may be found in the main body of the report and need not be duplicated here. However, some comments regarding the findings do appear to be in order.

In part one of the study, the unexpected finding that school 1 was significantly higher than schools 2 and 3 on the pre-testing with the CMI Attitude scale did cause some initial concern. However, the decision to work with change scores helped somewhat, and in light of the post-test results where no differences were found it appears likely that this pre-test difference may be more of a statistical aberration from chance factors than anything else. The "teacher factor" mentioned later in this report may also have some bearing here, although this is questionable inasmuch as only four to five weeks of the school year had passed before pre-testing took place. Some consideration was given to using the percentage-gain statistical technique to create pre-post-gain scores for part one of the study. However, these efforts were abandoned when it became apparent that the technique, while addressing itself to the problem of regression, did itself create an even greater problem with such subtests as the Knowledge test where there was concern with having sufficient test ceiling. Briefly, in cases where a student's pre-test score approaches the test ceiling and when percentage-gain is used, a markedly elevated and indeed aberrant percentage-gain score is created. Hence, the t-test was retained as being the most feasible and workable at this point in the study.

On the CMI Knowledge test both school 1 and school 3 showed significant pre-post-gains. Just why the controls in school 3 showed as great a gain as the treatment group in school 1 is not readily discernable. One possibility may be that the relative gains shown are due to some subtle institutional factors, particularly since schools 1 and 3 are

socioeconomically very much alike and school 2 tends to have a relatively greater percentage of low socioeconomic status students. In addition, it should be noted that a highly significant factor in explaining these relatively lower scores for school 2 may well be that students at this school did not have any study hall time in their schedules, meaning that to use the occupational materials and kits they had to check them out from the guidance office on their own time. Obviously, this would markedly curtail the extent to which such materials are used. It is, however, very interesting to look at the questionnaire results from part two of the study (item #2) which show no real differences between school 2 and 3 in the extent to which career kits were used, even though school 3 did have study hall time. School 1 showed a much higher percentage of reported use of the career kits. What is demonstrated here, as will be discussed later in the report, is not only the "teacher factor" but also the importance of making kits easily accessible to students in their classrooms and other such places that students frequent, more so perhaps than the guidance office.

What seems to be reflected in items 1 and 3 of the questionnaire used in part one of this study is an increase in the number of job possibilities that a given student may be considering and a concurrent elevation in the degree of satisfaction that the student is experiencing with what he or she feels to be the most desirable job choice right now. There are some very real questions that ought to be raised about item #3 and what it means. Is it desirable for a student's satisfaction with his career choice to increase in grade nine? If so, what does it mean? A closed mind? Realistic certainty? Premature crystalization without sufficient exploration? It

seems that the meaning of an item such as this must be carefully considered in the context of one's philosophical beliefs and theoretical understandings of vocational and career development.

In part two of this study, interpretation of the analyses is confounded by the fact that this was a post-test-only design and one has no way of knowing what existing pre-test differences there may have been. The likli-hood of such pre-existing differences is enhanced when one considers that such between schools differences did exist for the CMI Attitude scale pre-test in part one of the study.

One of the most solid and explainable findings from the study appears to be in item two of the evaluation questionnaire in part two of the study, where a substantially greater percentage of students in school 1 indicated that they had used the career kits than was so for either of the other schools even though each school had the kits within the building for the same amount of time. It was in school 1 that the Job Experience Kit and the Occupational Exploration Kit were placed in a social studies classroom for several weeks. In this room there are five classes (120 students) daily. Moreover, the teacher is very career conscious, has counselor certification, and worked for five years for the Employment Security Commission. (The results of the interview with this teacher are included in a later section of this report.) After several weeks with this teacher, the kits were moved to the room of an English and social studies teacher where they were made available to students. At least 50 different 9th grade students would have access to the kits in this room.

It is important to note that between 80 and 89% of the students in each of the three schools indicated that the program had helped them to some extent in their thinking about careers, and between 84 and 91% of the students would recommend continuing this program. On these items there

was no differentiation among the schools in terms of the kind of response given. Just what these results mean may be open to some question; social desirability may be a factor with a transparent questionnaire administered to 9th grade students. However, the anonymity of student responses should have helped to insure the credibility of the results.

In the ensuing section the evaluative data from counselors and teachers is reported.

III. Collaborative Evaluation Sessions

Counselor Interviews. The data in this section was gathered at a meeting with the 9th grade counselors and the project director. The data was gathered partially through structured questions to the counselors, and through group discussion about the results of the project. This evaluative information will be reported here along with the questions to which the counselors responded.

1. What historical (non-treatment) factors can you think of that might account for some of the findings?

There were no historical factors reported during the course of the study. It was in discussing this question, however, that the very active involvement of a civics teacher in school number 1 was discussed. It immediately became apparent that this teacher should be interviewed, and results of same are reported in the following section.

2. How were the students in your school introduced to the availability of the SRA kits?

There was a good deal of variability in methods used by the counselors to introduce the kits to the students. One counselor purposely did not push the kits in any way, but did present them to students individually when they came in to see him; the idea being

that the students would then pass the word to other students with a multiplication effect. In school 2, the kits were demonstrated and briefly described by the counselor in some of the students' regular classes. In school number 1 the kits were introduced to the students over the school public address system, and students were told that the kits would be available in one of the regular classrooms.

3. How did the students in your school have access to the SRA kits?

Once again there was some variability in the ways and extent to which students had access to the kits. In school number 1 the kits were made available in a regularly used classroom where students had both some in-class time and any free time when they might avail themselves of these materials. School 2 had very little availability of the kits because students either had to be released from a class (which was often difficult to achieve) or come in after school hours to use any of the kits. They could, however, check out materials from the guidance office where the kits were located. Nevertheless, this resulted in a rather low incidence of usage, particularly of the Occupational Exploration Kit. In school number 3 students had to come to the guidance office to check out the kits where they would be permitted to use them in a vacant room during study hall time or other free time that they might have. There was a strong concensus among counselors that it was desirable for a student to have time during the school day to avail themselves of these kits and related materials. There seemed to be some mixed impressions as to whether the materials should be maintained in the guidance office or in some other accessible part of the school building.

4. What was done to facilitate or encourage student use of the kits?

It was undoubtedly so, that the students in school number 1 received the greatest amount of active encouragement to use the kits. This came both from the counselor, who would encourage each student he saw individually to use the materials in conjunction with his registration for school for the following year, and from a civics teacher, who was very career conscious and frequently used career materials in conjunction with his civics class. The encouragement in school number 2 came primarily in terms of verbal suggestions to individual students whom the counselor happend to be seeing for other reasons. In school number 3, individual students who the counselor thought might be receptive were approached by him to come in during a study hall and learn about the new kits and were available in the school. In turn, other students were made aware of the existence of the kits by their peers. It appeared to be so that students needed not only the opportunity to use the kits but encouragement to do so by as many people in the school as possible. This is not to imply harrassment, but rather that students seem more likely to hear the message when it comes from the counselor in one context, from an English teacher in another context, and from a civics teacher in still a third context.

5. What are your feelings about the usefulness of the SDS and the kits? What are your impressions of how students respond to the SDS and the kits?

There were a variety of feelings and opinions expressed to these questions, the essence of which is reported here. One counselor found that the Job Experience Kit was more popular at the outset but that the novelty wore off rather soon. He also felt strongly that whatever gains were made from a single administration of the Self-Directed Search in

October during a single class period was probably lost three months later when students were post-tested in January. There was a strong unanimous feeling that student interest is maintained more in using the SDS than with the previously used Kuder. The feeling seemed to be that the instrument is brief, varied, and maintains students' interest. The kits were generally seen as being useful and of at least moderate interest to students and some reported anecdotes of rather high student interest and involvement with the kits.

Counselors also reported that a substantial number of students had some difficulty in understanding the summary work at the end of the SDS booklet. To assist with this, one counselor made a transparency of these pages to project by way of an overhead projector and demonstrated how to chart the data and put it together. Some reported that on page 10 of the SDS booklet there was a good deal of student confusion in identifying the letters for the various scales as they were instructed to do.

6. If you were running the study again, what would you want to do differently?

There was a strong concensus among the counselors that the Self-Directed Search and the SRA kits ought to be used in conjunction with each other. A strong feeling was also present that the students do need some follow-up to the SDS, and that this might be by way of the kits, teacher support in the classroom, occupational exploration groups, etc.

Another counselor indicated that he would administer the SDS totally by himself without having to rely on teacher support because he felt he could get more closure on the project within the time limits he had.

Others would like to see more coordination of occupational information with class assignments and would like much more teacher and parent involvement with encouragement for follow-up use of occupational kits and materials.

There was some feeling that many students, particularly those more talented academically, could use the SDS effectively as early as 8th grade. One counselor would want to use the Kuder Interest Inventory in grade 8 and the SDS in grade 9.

7. How did this project affect what you do in your work? What did you learn from it?

One counselor said that he learned that kids <u>are</u> interested in exploring careers; that he had previously had doubts about it. Another says that he discovered that some kids who are deceptively shy when talking about careers in class do indeed think about them when they are seen individually.

The importance that kids place on getting instant results was highlighted and, in this way, the brevity of the SDS instrument as well as the closure attained with it were seen as important factors.

One counselor discovered that the softwear and hardware that is used is really not so important, but that many people working together is vital.

Some decided that the Career Maturity Inventory could be a good teaching and discussion instrument in helping students think about jobs, careers, and their lives.

<u>Teacher Interviews</u>. Two teachers (one from school 1 and one from school 3) who were seen by the counselors as having some involvement, knowledge of, or interest in the project were interviewed. These results are summarized here.

A social studies teacher in school 1 indicated that he has approximately one-half of the 9th grade in his social studies classes. He says that he focuses a good deal on jobs, the labor market, testing information, Civil Service information and has a rather massive amount of material available from his five years of work with the Employment Security Commission. He spent three to four days of in-class time with students using the materials and talking with them about jobs and then another month during study halls when students could come in and use the materials there. The occupational kits used in this study were employed by him as a supplement to his regular classroom work. He indicated that feedback he got from students was that the SDS was a highly visible instrument, that some were resistive to doing it, that others found it to be an interesting and rather novel task, and believes that some found some reinforcement for what they already knew about their own interests. He furthermore felt that the kits might be far more useful if they were placed in the library where more students could have access to them, and that some of the materials (particularly the overlays) were too restrictive in identifying occupations. For some students, however, it seemed to be a different way to learn, and stimulated some to do some more reading and investigating on their own.

The teacher in school number 3 who was interviewed had rather minimal affiliation with the project in that she administered the CMI in her English classes. She indicated that she did nothing to push or encourage the use of materials because she had been instructed to simply "let the project happen" as she continued to do the things that she usually did with her classes. She indicated that she did not use

the SRA kits in class and didn't think that she had mentioned them in classes, and in fact, the only allusion that she may have made to work would be to stress the importance of developing proper values and attitudes regarding work. This does not sound markedly different from what is so for many classroom teachers. She indicated that she had no feedback from the students regarding the kits or the project but that it was her own impression that kits may be most useful for college-bound students.

IV. Summary

Although the statistical findings of this study are difficult to summarize, there are certain statements that can be made.

1. The lack of changes for school number 2 in this study may well be due to the presence of a relatively large number of students from low income families, and this seems particularly important since the very factor of job choice which is being investigated is an integral factor in determining socioeconomic status.
2. As with any research project, questions can be raised regarding the appropriateness of the measures being used. It is possible that the CMI was not the appropriate measure to be used to test for changes coming from the SDS. One indication that changes may have occured that were not picked up was illustrated by a counselor who noted behavioral differences in a substantial number of students after taking the SDS, finding that more of them than before were doing such things as writing for career and job information, and requesting his help in deciphering or interpreting information and materials that they had found.

3. It seems very likely that whatever gains may have come from the SDS for two of the schools would be lost in testing several months later.
4. Although not errorless, this study encountered fewer problems than those with which most educational research is fraught. This certainly attests to the competent planning and management of Mr. Vose and the 9th grade counselors in Bangor, and to the cooperation and support of the administration and teachers of the Bangor public schools.

V. Recommendations

The following recommendations are offered for further research and program planning:

1. It is suggested that a similar study be undertaken using the SDS with other possible outcome measures, some of which may be behavioral in nature.
2. It is suggested that following the administration of the SDS changes should be sought within a shorter period of time than the three months which was used for some schools in this study.
3. In using the CMI, one should beware of the possible problems associated with inadequate test ceiling on some of the sub-tests (e.g. the Knowledge test).
4. It is suggested that similar studies build-in the plan to use analysis of covariance or multivariate analysis as the statistical treatment.
5. It is recommended that more efforts be made to have the occupational kits available in classrooms, library and other points of convenient student access.
6. It is suggested that consideration be given to more in-class time devoted to career development activities.

7. It is recommended that teacher involvement with career development activities be encouraged. It may be useful to take some teachers through the SDS and the use of the kits to help them see how they might relate these materials to their class activities.
8. Investigate more in depth with students regarding what they perceive helpful to them as they think about themselves, and their future work, jobs, and careers.

APPENDIX 2

VOCATIONAL GUIDANCE QUESTIONNAIRE

Please Complete:

Name_____

Male _____ Female _____ (check one)

Age _____ Grade _____

School_____

1. List all of the occupations you are considering right now.

_____

_____

_____

_____

_____

2. Which occupation is your first choice? (If undecided, write "undecided")

_____

3. How satisfied are you with your present choice of a career?

_____ Well satisfied
_____ Moderately satisfied
_____ Dissatisfied but intend to remain
_____ Dissatisfied and intend to change
_____ Undecided about future vocation

APPENDIX 3

CAREER EDUCATION EVALUATION

This year the ninth grades in Bangor have taken part in a study to try to determine the best way to present career information to students. As ninth graders you have used the Self Directed Search, taken tests and filled out questionnaires. We would like you to evaluate the program by answering these few questions. Indicate your answer by checking the appropriate box.

1. Has this program helped you in your thinking about careers?

   ☐ Yes ☐ No ☐ A little

2. Have you used any of the career kits that have been provided?

   ☐ Yes ☐ No

3. We have used three different ways of presenting this material. The first semester Garland Street used the SDS, Union Street used the SRA materials and Fifth Street did nothing. The second semester Garland Street used the SRA materials, Union Street used the SDS and Fifth Street used both the SDS and the SRA materials. Which way do you think would be the best?

   ☐ Garland Street Way

   ☐ Union Street Way

   ☐ Fifth Street Way

4. Would you recommend continuing this program? ☐ Yes ☐ No

5. At what grade level do you believe this program should be offered?

   ☐ 8 ☐ 9 ☐ 10 ☐ 11

Comments:

APPENDIX 4

Number of Participants

481 students enrolled in grade 9 in Bangor

481 students were exposed to the SDS and the SRA kits

384 students completed pre and post-tests Crites Attitude Scale

386 students completed pre and post-tests Crites sub-test Knowing About Jobs

452 students completed the Vocational Guidance Questionnaire

419 students completed Crites sub-test Knowing Yourself

417 students completed Crites sub-test Problem Solving

358 students completed the Evaluation questionnaire